APRIL/MAY 2024

CEEL63A/BEEL63A — MICROCONTROLLER 8051 AND ITS APPLICATIONS

Time : Three hours Maximum : 75 marks

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SECTION A — (10 × 2 = 20 marks)

Answer ALL questions.

1. What are status flags?
2. Define PSW.
3. State the significance of timer.
4. What is called interrupt priority?
5. Write a program for swap operation.
6. What is meant by increment instructions?
7. Define external data move.
8. Compare PUSH and POP.
9. How display interfacing is working?
10. What is meant by seven segment display?

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SECTION B — (5 × 5 = 25 marks)

Answer ALL questions.

11. (a) Write a note on stack and stack pointer.

Or

(b) Discuss in detail the external memory.

12. (a) Give a note on interrupts of 8051.

Or

(b) Explain the serial data transmission modes.

13. (a) Elaborate the addressing modes of 8051.

Or

(b) Write a program to add two 16-bit numbers using 8051 instructions.

14. (a) Enumerate PUSH and POP instructions in 8051.

Or

(b) Give a brief account on data exchange

15. (a) Elucidate the functions of stepper motor interfacing.

Or

(b) Explain the interfacing of DAC.

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SECTION C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. With neat sketch, explain the input and output ports.

17. Describe the functions of counter and timer modes of 8051.

18. Explain the following

(a) Bit level logic operations

(b) Byte level logic operations.

19. Write an assembly language program to divide two 8 bit number .

20. Give a detailed note on LCD display.

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